UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/842,161	04/26/2001	Hidetaka Iwai	206580US0	6889

22850 7590 01/30/2002

OBLON SPIVAK MCCLELLAND MAIER & NEUSTADT PC
FOURTH FLOOR
1755 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VA 22202

EXAMINER	
YU, GINA C	

ART UNIT	PAPER NUMBER
1617	

DATE MAILED: 01/30/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/842,161	Applicant(s) IWAI ET AL.	
	Examiner Gina C. Yu	Art Unit 1617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 November 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4) ☒ Interview Summary (PTO-413) Paper No(s). *2 1/2*.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Receipt is acknowledged of Amendment filed on November 11, 2001. Claims 1-20 are pending. The rejection under 35 U.S.C. § 103 in the previous office action is withdrawn, and new rejections have been made in view of the amendment above and further consideration by the examiner.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "based on 1" in claims 1 and 20 is a vague language to describe a ratio.

Claim 2 recites the limitation "the oil-in-water emulsion ...that has a light transmittance..." in claim 1. There is insufficient antecedent basis for this limitation in the claim. Rephrasing the term to "an oil-in-water emulsion according to claim 1 having a light transmittance. . . " is suggested.

Claim 3 recites the limitation "the particles in the emulsion" in claim 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 6 is rendered indefinite by the addition of the word "type" to an otherwise definite expression. See MPEP § 2173.05 (b) (E). The word "type" here unnecessarily extends the scope of the well-recognized term "oil-in-water emulsion" so as to render it indefinite.

The term "high-pressure commercial emulsifier" in claim 15 renders the claim indefinite because it is not clear as to what is regarded as "high-pressure" emulsifiers nor is it disclosed in the specification what the commercial availability of these emulsifiers are. The term "high-pressure" in the claim is a relative term which is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

In claim 20, the term "a time and under conditions suitable for forming an oil-in-water emulsion" is vague and indefinite. The metes and bounds of the scope of the claim are unclear as to time and conditions encompassed thereby.

The remaining claims are rejected as depending on indefinite base claim.

Claim Objections

Claim 7 is objected to for the typographical error. See the bracket at the end of the sentence.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-4 and 6-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yu (English Translation of JP 63-126542 provided herewith), or alternatively, in view of Cook (US 4908154).

Yu teaches transparent microemulsions containing hydrophilic ionic surfactants and oil components used for pharmaceuticals and cosmetics. See p. 2, lines 1 –17; p. 7,

lines, 9-10. The reference teaches that the ratio of the nonionic surfactant to the oil ingredients in the invention may range from 1:05 to 1:10, and the emulsified particle size is 0.01-0.1 microns. See instant claims 1 and 3. See p. 4, lines 11-12. The application of the invention, such as liquid detergent, shampoo, hair tonic, etc, are disclosed in p. 7, lines 19-24. See instant claims 19. Further incorporating anionic, cationic, amphiphilic surfactants, or mixture of thereof, are taught in p. 4, line 12 – p. 5, line 5. See instant claims 11-13. The reference also teaches that the HLB of the ionic surfactants should be hydrophilic since it is necessary to obtain oil-in-water type microemulsions. It is known in the art that surfactants having HLB of 8-18 meet this requirement. See Ansel, p. 244 col. 2, lines 9-13.

Although Yu lacks a specific example formulation having the ratio of oil to hydrophilic surfactants which is greater or equal to 10:1, the ratio of 10:1 is taught to be useful. Thus, one having ordinary skill in the art at the time of the invention was made would have had expectation of successfully formulating a transparent microemulsion having such high oil to hydrophilic surfactant ratio.

Also, while Yu does not explicitly teach the shearing rate as recited in the instant claims, the reference does teach in p. 7, lines 4- 8, to use a high pressure homogenizer or ultrasound emulsifying machine to produce strong shear stress of 400 atm or higher, or preferably of 600 atm or higher at a temperature below 50 °C. Examiner takes the position that employing these equipments would obviously produce the shearing rate of the instant claims, unless proven otherwise. Applicants are asked to specifically distinguish how, if any, the instant invention is nonobvious over this teaching.

2. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yu as applied to claims 1-4 and 6-20 above, and further in view of Drapier et al. US 6121228 ("Drapier").

Yu, discussed above, lacks an example of composition having both solid and liquid oil with specific viscosity. Yu teaches that while liquid oils are preferred, oils in solid state may be used if they become liquid when mixed. See p. 5, line 6 – p. 6, last line. See also Tables for high alcohols, such as isostearyl alcohol, showing satisfactory transparent microemulsions.

Drapier teaches water-in-oil microemulsion liquid detergent having viscosity ranging from 6-300 milliPascal. See col. 4, lines 47 – 67; col.14, lines 17 - 26.

Given the teaching in Yu that the both liquid and solid oils may be used for variety of microemulsion applications such as liquid detergents, and the teaching that thickening agents may be added in the compositions, it would have been obvious to one having ordinary skill in the art to have expected successfully producing a product having desired viscosity by routine experimentations. The routineer who contemplates to formulate the liquid detergent according to Yu would have been motivated to adjust the viscosity as taught by Drapier.

Response to Arguments

Applicant's arguments with respect to rejections made on claims 1-9 in previous office action have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Cook, US 4908154, col. 11, lines 24 - 42 (describing method of forming a microemulsion at liquid flow velocity at 100 meters/second, liquid flow rate at about 60 mL/minute at 7000-8000 psi). Ansel, p. 247, col. 2, (teaching surfactants having HLB range of 15-18 produce transparent oil-in-water microemulsions).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gina C. Yu whose telephone number is 703-308-3951.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minna Moezi can be reached on 703-308-4612. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-4242 for regular communications and 703-308-4242 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1234.

Gina C. Yu
Patent Examiner
January 26, 2002

MINNA MOEZIE, J.D.
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600